

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

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In re PROSHARES TRUST II SECURITIES	:	Civil Action No. 1:19-cv-00886-DLC-SLC
LITIGATION	:	
_____	:	<u>CLASS ACTION</u>
	:	
This Document Relates To:	:	
	:	
ALL ACTIONS.	:	
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**DECLARATION OF HAIM BODEK IN SUPPORT OF LEAD PLAINTIFFS'  
MEMORANDUM OF LAW AND [PROPOSED] FINDINGS OF FACT  
AND CONCLUSIONS OF LAW PURSUANT TO 15 U.S.C. §78U-4(C)(1)**

I, Haim Bodek, provide this declaration in support of Lead Plaintiffs Thomas Butler, III, Anthony Ludovici, and Lisa Ludovici's Memorandum of Law and [Proposed] Findings of Fact and Conclusions of Law Pursuant to 15 U.S.C. §78U-4(C)(1). The following facts are true and correct to my knowledge, and if called to testify, I could and would testify competently thereto:

1. I am the founder and Managing Principal of Decimus Capital Markets, LLC, a tactical consulting and strategic advisory firm focused on algorithmic trading and market structure that I founded in July 2011. I am also a Co-Portfolio Manager and Crypto Trading Strategist of Hyperion Decimus, LLC, a hedge fund manager focused on the crypto-asset space.

2. I am qualified to serve as a consulting expert in this litigation because of my extensive background as an electronic trading executive and algorithmic trading strategist, with more than twenty years of experience in the automated trading space, with the greater part of my career being focused on electronic volatility trading. In recent years, I have been engaged as a testifying or consulting expert in support of complex litigation where I have provided both quantitative and qualitative analysis while leveraging my in-depth knowledge of industry practices, historical tick-by-tick market data, and the architecture of the electronic trading process.

3. I graduated from the University of Rochester in 1995 with a Bachelor of Arts degree in the fields of mathematics and cognitive science. After graduation, I took a series of jobs involving software development and machine learning.

4. In September 1997, I began working as a financial engineer at the Hull Group, a preeminent options market maker, where I created algorithms to electronically make markets in equity and equity index options. The Hull Group was acquired by Goldman Sachs in 1999, and I transitioned into Goldman Sachs as an Associate in the firm's Equities Division. I was subsequently promoted to Vice President, Equities Division, and remained with Goldman Sachs until June 2002. I

left Goldman Sachs in June 2002 to start Sixfold Technologies, LLC, a startup that provided software infrastructure products for blade and cluster computing.

5. In March 2003, I joined UBS to work in its Electronic Volatility Trading unit, an automated equity options market making desk. I was promoted from Director to Executive Director in less than a year, and I was later promoted to the position of Managing Director and Joint Global Head of Electronic Volatility Trading. The electronic trading systems and algorithms that I developed at UBS processed a significant percentage of US options volume during the period of my tenure.

6. In August 2007, I left UBS to start Trading Machines LLC, a high frequency trading (“HFT”) firm that at its peak executed upwards of a half percent of US options market volume. My time at Trading Machines was the subject of *Dark Pools*, a 2012 book on market structure and HFT by journalist Scott Patterson. Trading Machines operated from September 2007 until March 2011.

7. In 2011, I approached the U.S. Securities and Exchange Commission concerning unfair advantages provided by electronic stock exchanges to preferred HFT firms in the form of complex order types. My complaint resulted in a record \$14 million fine that was assessed against BATS Global Markets in January 2015. I was subsequently awarded a \$3.5 million whistleblower award by the SEC for my assistance in the matter. I have continued to assist the SEC in other matters involving electronic trading and execution that have led to successful enforcement actions.

8. I have authored two books on market structure. *The Problem of HFT: Collected Writings on High Frequency Trading & Stock Market Structure Reform* was published in 2013. *The Market Structure Crisis: Electronic Stock Markets, High Frequency Trading, and Dark Pools*, which I co-authored with Stanislav Dolgoplov, a regulatory consultant at Decimus, was published in 2015. Furthermore, my in-depth analysis of the order type controversy appeared as a chapter in *Global*

*Algorithmic Capital Markets: High Frequency Trading, Dark Pools, and Regulatory Challenges*, which was published by Oxford University Press in 2019.

9. In June 2019, I was retained by the law firms Robbins Geller Rudman & Dowd LLP (“Robbins Geller”) and Hagens Berman Sobol Shapiro LLP (“Hagens Berman”) (collectively, “co-Lead Counsel”) to provide expert consultative services in connection with the above-captioned matter. My retention and compensation were not contingent upon any specific opinions that I formed or rendered, and I understood at all relevant times that I was retained as an independent expert who was expected to render independent opinions.

10. Prior to June 21, 2019, when co-Lead Counsel filed the Consolidated Amended Complaint (the “CAC”), I communicated with attorneys from Robbins Geller and Hagens Berman, through phone calls and emails, and provided my input and analysis in connection with co-Lead Counsel’s preparation of the CAC. Co-Lead Counsel provided me with the final filed version of the CAC for my review and I believe its allegations were consistent with my input and analysis. I did not raise any concerns with co-Lead Counsel regarding that filing, nor do I have any such concerns now.

11. After Defendants filed their motion to dismiss the CAC in August 2019, I continued to communicate with attorneys at Robbins Geller and Hagens Berman, and provided comments and suggestions to co-Lead Counsel on how the allegations in the CAC could be further elaborated upon and strengthened to address certain arguments made in Defendants’ motion to dismiss.

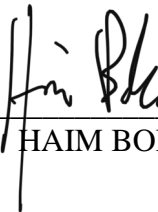
12. In connection with co-Lead Counsel’s preparation of the Consolidated Second Amended Complaint (the “SAC”), I reviewed proprietary trading data, including VIX futures trading volume and pricing data, and conducted an analysis of the liquidity in the VIX futures market using historical tick-by-tick market data. I also advised co-Lead Counsel about what information would

have been available to the defendants vis-à-vis retail investors, assisted co-Lead Counsel with verifying the accuracy of certain facts and allegations set forth in the SAC, and provided comments and feedback on draft language in the SAC. I have reviewed the SAC and believe its allegations were consistent with my input and analysis. I did not raise any concerns with co-Lead Counsel regarding that filing, nor do I have any such concerns now.

13. Based on my work on this matter, I believe that Robbins Geller and Hagens Berman were diligent in vetting and describing the facts and allegations contained in the CAC and the SAC. I do not have any concerns regarding Robbins Geller and Hagens Berman's diligence in any area of this matter.

I declare, under penalty of perjury under the laws of the United States of America, that the foregoing is true and correct. Executed this 7<sup>th</sup> day of May, 2021, in Stamford, Connecticut.

By: \_\_\_\_\_



HAIM BODEK